

MULTI-STAGE PROCESSES FOR COATING SUBSTRATES WITH MULTI-COMPONENT COMPOSITE COATING COMPOSITIONS

Abstract of the Disclosure

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A process for coating a substrate is provided which includes the following steps:

- (a) applying a waterborne base coat composition to a surface of the substrate;
- 10 (b) applying infrared radiation at a power density of 1.5-30.0 kW/m² and a first air stream simultaneously to the base coat composition such that a pre-dried base coat is formed upon the surface of the substrate; and
- (c) applying a second air stream in the absence of infrared radiation to the base coat composition such that a dried base coat is formed upon the
- 15 surface of the substrate.

Various embodiments of the invention are disclosed including continuous, batch, and semi-batch processes, which may include additional process steps, such as subsequent application of a topcoat. The process may be used to coat a variety of metal and polymeric substrates, for example,

20 those associated with the body of a motor vehicle.